

## EA 2.1A Displaying Data Activity

**Activity Purpose:** The purpose of this activity is to provide opportunities to display different pieces of data depending on the questions that you start with. Data clearly displayed helps to insure that people clearly understand the message you want to get across, avoids miscommunication, and provides a visual representation of your information. Data that can be displayed helps to make sure decisions are made that are defensible.

### Activity Resources:

- Attached data sets and questions to answer
- Excel graphing template (named: EA 2.5 Excel Graph Template (an Excel document))
- Atomic Learning website
  - Go to <http://www.iowaaeaonline.org> and select atomic learning link. If you do not know your log in and password information you can obtain that from your local school media specialist. If they do not have this information contact the media division at your local Area Education Agency. Atomic learning is a free web based tutorial program. For this activity you would use the excel tutorials.
- Activity reflection sheet (named: EA 2.5 Graphing Activity Reflection Sheet (a word document))

**Task:** Using Excel and the attached data sets (tables) create a graph for each that would display the answer to the questions. Make sure the graph has a title and the axes are labeled. Return the graphs for each of the questions to your instructor with the reflection sheet.

Provide your results to your instructor via email or on paper.

### Graphing Sample Data

The questions that were created for a QIC-decide process are listed below. For each one the data table is given. Show how you would display that data to answer the question given.

Question 1: What is trend in office referrals during lunchtime?

Question 2: What months have the most office referrals of 6<sup>th</sup> Grade students for disruptive behavior at lunch?

| Office Referrals for Disruptive Behavior at Lunch |           |         |          |          |         |          |       |       |
|---|-----------|---------|----------|----------|---------|----------|-------|-------|
|   | September | October | November | December | January | February | March | April |
| 6 <sup>th</sup> grade                             | 25        | 18      | 12       | 15       | 10      | 6        | 3     | 5     |
| 7 <sup>th</sup> grade                             | 5         | 6       | 4        | 7        | 2       | 3        | 2     | 6     |
| 8 <sup>th</sup> grade                             | 3         | 5       | 3        | 6        | 2       | 6        | 7     | 12    |

Question 3: How many students are passing classes during the 4<sup>th</sup> quarter?

Question 4: What quarter shows the most students passing classes? What quarter has the least number of students passing classes?

Total Number of Students is 50

| Number of Students Passing 10 <sup>th</sup> grade Classes |                         |                         |                         |                         |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
|   | 1 <sup>st</sup> Quarter | 2 <sup>nd</sup> Quarter | 3 <sup>rd</sup> Quarter | 4 <sup>th</sup> Quarter |
| Language Arts   | 42                      | 45                      | 42                      | 40                      |
| Math  | 50                      | 48                      | 40                      | 41                      |
| Social Studies  | 48                      | 46                      | 47                      | 48                      |
| Science   | 40                      | 42                      | 41                      | 39                      |

Question 5: What is the ethnic makeup of the students in our district?

| Student Population |      |
|--------------------|------|
| White              | 78 % |
| African American   | 5%   |
| Hispanic           | 12%  |
| Asian              | 3%   |
| Native American    | 2%   |

Question 6: How do the scores of students on the ITBS reading total compare to the scores for students on our district developed reading test?

| Student Name | ITBS Reading Total percentile rank score | District developed reading test raw score |
|--------------|--|---|
| A            | 40                                       | 8   |
| B            | 50                                       | 12  |
| C            | 55                                       | 14  |
| D            | 90                                       | 18  |
| E            | 25                                       | 7   |
| F            | 65                                       | 12  |
| G            | 70                                       | 15  |
| H            | 80                                       | 15  |
| I            | 10                                       | 5   |
| J            | 85                                       | 18  |
| K            | 75                                       | 16  |
| L            | 95                                       | 20  |

Question 7: Is our 8<sup>th</sup> grade class (year 00-01) doing better than they have done in previous years on the Generic Science test?

Question 8: Which grade has the most students scoring in the less than proficient range on the Generic Science Test during the 99-00 year?

Question 9: Which year did we have the most students in the proficient or higher range on the 7<sup>th</sup> grade Generic Science Test?

| Percent of students scoring at each proficiency level on the <u>Generic Science Test</u> |                       |       |       |                       |       |       |                       |       |       |
|--|-----------------------|-------|-------|-----------------------|-------|-------|-----------------------|-------|-------|
| Grade  | 6 <sup>th</sup> grade |       |       | 7 <sup>th</sup> grade |       |       | 8 <sup>th</sup> grade |       |       |
| Year   | 98-99                 | 99-00 | 00-01 | 98-99                 | 99-00 | 00-01 | 98-99                 | 99-00 | 00-01 |
| Less than Proficient   | 43%                   | 45%   | 44%   | 43%                   | 42%   | 44%   | 41%                   | 44%   | 41%   |
| Proficient   | 51%                   | 50%   | 49%   | 48%                   | 47%   | 49%   | 50%                   | 48%   | 48%   |
| Advanced   | 6%                    | 5%    | 7%    | 9%                    | 11%   | 7%    | 9%                    | 8%    | 11%   |